

REMARKS

Claims 1, 2, and 5-8 stand rejected under 35 USC 103(a) as being unpatentable over US patent application No. 2003/0112758 (hereinafter Pang). Reconsideration of the rejections and allowance of all the pending claims is respectfully requested in view of the foregoing amendment, the submitted declaration and the following remarks.

Claims 3-4, and 9-10 were previously cancelled. Claims 1, 2, and 5-8 remain pending.

Claims 1 and 6 have been amended to emphasize aspects of the present invention.

M.P.E.P. 2143.03 provides that to establish *prima facie* obviousness of a claimed invention, all the claims limitations must be taught or suggested by the prior art. All words in a claim must be considered for judging the patentability of the claim against the prior art. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending there from is nonobvious.

Claim 1 is directed to a method for regulating a jitter buffer for buffering a data packet stream. Claim 1, as amended, recites comparing a currently registered transmission delay with a previously derived weighted mean delay value. Claim 1 further recites determining a weighting of the currently registered transmission delay as a function of a result of the comparing, wherein the currently registered transmission delay is weighted with a first predefined weight value if the currently registered transmission delay is shorter than the previously derived weighted mean delay value and is weighted with a second predefined weight value if the currently registered transmission delay is longer than the previously derived weighted mean delay value, with the first weight value being larger than the second weight value. A quotient of the first predefined weight value and the second predefined weight value is selected to define a tradeoff between a delay introduced by the jitter buffer and a data packet loss rate. Basis for the foregoing amendment may be found at least in paragraphs 6, 11, 22 and 27 of the US patent application publication of the present invention.

As discussed in greater detail below Pang fails to describe or suggest an operational relationship where a quotient of the first predefined weight value and the second predefined weight value is selected to define a tradeoff between a delay introduced by the jitter buffer and a data packet loss rate, as set forth in claim 1. Accordingly, Pang fails to render unpatentable claim 1, and also claims depending from claim 1, and these rejections should be withdrawn.

The Office Communication purports that weighting factors alpha and beta of Pang are analogous to the weight values of the claimed invention. Pang describes in paragraphs 55-57 (reproduced below in their entirety) a first approach that uses a single weighting factor alpha (α). Accordingly, as evidentiary supported by the declaration submitted with this response, one skilled in the art would recognize that this first approach of Pang fails to describe or suggest an operational relationship where a quotient of the first predefined weight value and the second predefined weight value is selected to define a tradeoff between a delay introduced by the jitter buffer and reduce a data packet loss rate, as set forth in claim 1.

[0055] To construct a histogram for determining the buffer size and delay, packet delays need to be determined. A plurality of methods may be used to calculate delay. In one approach, the jitter buffer system incorporates a method that uses a linear recursive filter and is characterized by the weighting factor alpha. The delay estimate is computed as:

$$d_i = \alpha * d_{i-1} + (1-\alpha) * n_i$$

[0056] And the variation is computed as:

$$v_i = \alpha v_{i-1} + (1-\alpha) |d_i - n_i|$$

[0057] where α is a weighting factor, d_i is the amount of time from when the i th packet is generated by the source until it is played out at the destination host, n_i is the total delay introduced by the network, and v_i is the variable delay experienced by packet i as it is sent from the source to the destination host.

[0058] A second approach adapts more quickly to the short burst of packets incurring long delays by using a weighting mechanism which incorporates two values into the weight-

ing factor, one indicative of increasing trends in the delay and one indicative of decreasing trends.

[0059] if ($n_i > d_i$) then

$$d_i = \beta * d_i + (1-\beta) * n_i$$

[0060] else

$$d_i = \alpha * d_i + (1-\alpha) * n_i$$

Pang describes in paragraphs 58-59 (reproduced above in their entirety) a second approach that uses a first weighting factor alpha (α) and a second weighting factor (β). However, under this second approach of Pang, the first weighting factor is used alone (i.e. independently of the second weighting factor) when an increasing trend in a delay is present. Conversely, the second factor is used alone (i.e. independently of the first weighting factor) when a decreasing trend in the delay is present. Consequently, as evidentiary supported by the declaration submitted with this response, one skilled in the art would appreciate that this second approach of Pang also fails to describe or suggest an operational relationship where a quotient of the first predefined weight value and the second predefined weight value is selected to define a tradeoff between a delay introduced by the jitter buffer and a data packet loss rate, as set forth in claim 1. In view of

the foregoing considerations, it should be apparent that the express description of Pang actually teaches away from the claimed invention. The Examiner argues in terms of inherency. However, the express teachings of Pang, as noted above, and the evidentiary basis provided by the declaration submitted with this response, do not support an inherency theory for rejecting the claimed invention. Applicant respectfully submits that that the Office Communication has failed to meet the burden required to appropriately establish a *prima facie* case of obviousness. Accordingly, this basis of rejection should be withdrawn.

Independent claim 6 is directed to a jitter buffer regulating circuit for regulating a jitter buffer for buffering a data packet stream. In view of the foregoing discussion, applicant respectfully submits that Pang fails to describe or suggest an operational relationship where a quotient of the first predefined weight value and the second predefined weight value is selected to define a tradeoff between a delay introduced by the jitter buffer and a data packet loss rate, as set forth in claim 6. Accordingly, Pang fails to render unpatentable claim 6, and this rejection should also be withdrawn.

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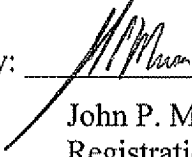
Conclusion

It is respectfully submitted that each of the claims pending in this application recite patentable subject matter and it is further submitted that such claims comply with all statutory requirements and thus each of such claims should be allowed.

The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including the fees specified in 37 C.F.R. §§ 1.16 (c), 1.17(a)(1) and 1.20(d), or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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